

FP03-0076-01

ABSTRACT OF THE INVENTION

The present invention relates to an optical component and the like having a structure that can increase the absolute value of the angular dispersion, and also can reduce the temperature dependence of the diffraction angle. The optical component comprises a diffraction grating element and a prism. The prism is composed of a material with a refractive index of n_1 , and the diffraction grating element and the prism are surrounded a material with a refractive index of n_0 . In the case that light of wavelength λ is incident on the diffraction grating element at an incident angle of θ_0 , then taking the incident angle with respect to the first surface of the prism to be θ_2 , taking the emission angle of the light emitted from the second surface of the prism to be θ_5 , taking the temperature coefficient of the diffraction angle in the diffraction grating element to be F_g , taking the temperature coefficient of the emission angle θ_5 of the light emitted from the second surface of the prism, assuming that the incident angle θ_2 of the light incident on the first surface of the prism is fixed regardless of the temperature, to be F_p , and taking the magnification rate of the angular dispersion caused by the prism to be M_p , the relationship " $n_1 > n_0$ AND $|\theta_5| > |\theta_2|$ " or " $n_1 < n_0$ AND $|\theta_5| < |\theta_2|$ " is satisfied, whilst also

FP03-0076-01

satisfying the relationship " $-2M_p F_g < F_p < 0$ " or " $-2M_p F_g > F_p > 0$ ".